

DIGITAL ETHNICITY

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ABSTRACT

Digital Ethnicity is a concept based on Longstreet's (1978) model of the Aspects of Ethnicity. Digital Ethnicity was developed to describe the impact human interaction with digital communication technologies is having on cultural development. The ultimate goal for the development of Digital Ethnicity as a concept is to describe those aspects of digital ethnicity to achieve profiles of various digital ethnicities. These digital ethnic profiles are intended to guide thinking and provide insight into the social and educational needs of rapidly changing societal groupings by providing guidance for educational leaders, teachers and teacher education programs to prepare candidates who will be able to address the biological, social and cognitive changes brought about by pervasive use of digital communication technologies.

KEYWORDS

Learning Theory, Social Aspects of Technological Change, Digital Communication, Ethnicity

1. INTRODUCTION

Digital communication technologies pervade every facet of our lives. The influence of these technologies is changing human actions and beliefs; the construction of our social reality is in flux. A majority of the world's population 'text' rather than 'talk'; couples fall in love online and meet after the fact; gender identity is becoming a choice made not by biology but by a screen name or the physical appearance of an avatar. Social groups are formed in virtual space that provides new kinds of common identity to previously disparate individuals. Virtual schools prepare learners worldwide, while having no physical campus for teachers and learners to congregate. Palfrey and Gasser (2008) discuss the development of 'digital natives' whose "culture is global in scope and nature. Whether physically based in Rio de Janeiro, Shanghai, Boston, Oslo, or Cape Town, Digital Natives form part of global culture of their peers. They are connected to each other in terms of how they relate to information, how they relate to new technologies, and how they relate to one another" (p. 13). This first generation of Digital Natives are now in their late-30s and, as society dictates, becoming the new leadership for our nation and our world. Donald Trump was elected president of the United States. Although Trump is not a Digital Native, the reality of this outcome rests on manipulation of electronic media to influence beliefs and ultimately the outcome of an election – and it worked. A new 'Digital Ethnicity' has emerged, and it is critical to our collective futures to understand the implications.

2. BODY OF PAPER

Marc Prensky (2001a, 2001b) writes of Digital Natives and Digital Immigrants and how children are being socialized in vastly different ways than their parents. He states that "it is now clear that as a result of this ubiquitous [digital] environment and the sheer volume of their interaction with it, today's students think and process information fundamentally differently than their predecessors" (2001a, para 4). When discussing the implications for cultural loss due to the changes that are occurring to children immersed in interaction with digital technologies, Prensky (2001b) cites one key area of loss as the skill of reflection. He defines reflection as the ability to generalize and create mental models from our experiences and suggests that the implication for this loss is to develop educational strategies for developing reflection and critical thinking to counteract this seemingly media-induced loss in children.

Prensky (2009) continued his narrative writing of *Digital Wisdom* and calls for concerted efforts to realize the impact on child development both intellectually and socially and calls for teaching ‘digital wisdom’. He states that “the digitally wise distinguish between digital wisdom and mere digital cleverness”. He concludes that “It is through interaction of the human mind and digital technology that the digitally wise person is coming to be. I believe it is the time for the emerging digitally wise among us to embrace digital enhancement and to encourage others to do so.” These aspects of child development are critical issues for teacher educators as they prepare teachers to address student learning styles and needs.

Schools have always been the institutions that prepare current and future society; they are where organized, formal learning is intended to take place. But is the intention of schools as the center of learning a reality? As virtual experiences increasingly replace traditional face to face activities, it is critical to study those aspects of society and the resultant ethnicities that are guided by this new communication style. Prensky’s most current writings call for educational programs and practices that respond to the fact that today’s adults grew up in the pre-Internet 20th century and do not yet fully understand their children are fast becoming “humans with enhanced brains, all networked together” (2017).

Koutropoulos (2011) in his critique of the monolithic assumptions of Prensky’s *Digital Natives*, contends that from a social perspective and in contrast to writings about that portrayed digital natives as compliant, they are actually masters of their own destiny. Johnson (2006), a digital native herself teaching other digital natives, indicates that digital natives are complacent, actively seek authority figures and are unable to cast a critical gaze on their lives. This provides some argument for the role of teacher and learner in this digital age. Koutropoulos (2011) goes on to suggest that no organized research has been done to identify the real changes to education that should be developed in response to pervasive societal use of digital technology, and complains that we are not talking about pedagogy, and what is really good for the learners, but taking suppositions based on speculation rather than research to drive practice. Exploring the aspect of social value patterns included in this model to describe changes in our rapidly increasing digital society intends to provide insight into the demonstrated needs of learners that may be addressed by informed teaching practices.

Small and Vorgan (2008) discuss the effects of extensive interaction with digital technologies and observe that “as the brain evolves and shifts its focus toward new technological skills it drifts away from fundamental social skills, such as reading facial expressions during conversation or grasping the emotional context of a subtle gesture” (p.2). They talk of an increasing “brain gap” (p.3) resulting separate cultures. Small and Vorgan go on to discuss changes in communication preference style that often affects issues of privacy, how people meet socially, and often how they form loving attachments. Frank and Castek (2017) argue that learners must “develop the problem solving skills necessary for discerning accurate and reliable information, interacting with public services, communicating with friends, engaging in political activities, gaining employment, and participating in ongoing education (para 2).”

As digital technologies increasingly occupy the lives of young children, influencing their understanding of the world that surrounds them and influencing their development of communication and language skills, it is critical that deliberate analysis of the changes take place. Their engagement with these digital tools is shaping the preferences young children develop for their construction of reality and guides their interaction with their surroundings. The implications for the increased use of digital communication technologies on current and future educational practice are profound, and must be deliberately studied and addressed by education professionals to guide effective educational practice.

Longstreet’s (1978) construction of the concept of ethnicity, originally developed to describe patterns, or aspects, that represent areas of social behavior that may exist among members of a social group, appears to provide an appropriate and useful framework for investigating the impact digital communication tools are having on cultures and societies. Her definition of ethnicity focuses on cultural development during the earliest stages of human development, prior to the onset of children’s abstract thinking. This focus captures much of the timeframe given schools and teachers to accomplish the task of shaping formal and informal learning activities for students.

In a previous study (2010), the Digital Ethnicity concept utilized Longstreet’s ethnicity model (1978) and was tested in terms of the digital environment. The Digital Ethnicity Scale investigated the different aspects of ethnicity using a digital lens. Four aspects of digital ethnicity were identified and correlated directly with the five originally identified aspects of ethnicity Longstreet proposed in 1978. The aspects of 1) Intellectual Mode 2) Orientation Mode and 3) Social Value Patterns were distinct. Verbal Communication and NonVerbal Communication aspects from the original model were combined to form the 4th aspect of Digital Ethnicity named Communication Mode. The ultimate goal for the development of the Digital Ethnicity Scale

was to describe those aspects of digital ethnicity and collect these descriptions along with demographic data to achieve profiles of various digital ethnicities. These digital ethnic profiles may provide insight into the social and educational needs of rapidly changing societal groupings with hopes of providing guidance for future educational practice.

2.1 Why Ethnicity? Understanding the varying Definitions for the term ‘Ethnicity’

For most, the word ‘ethnicity’ conjures both abstract and concrete meanings, which are often contextual. In the concrete uses of government and institutions, ethnicity usually denotes race. In the more abstract, it often means a group of humans who are identified through shared characteristics that may be real or assumed. This ambiguity seems to track the lack of agreement among scholars that has ebbed and flowed along with interest in the endeavor of building a consensus for meaning. Isajiw (1974) analyzed 65 sociological and anthropological studies and found that only 13 had definitions for the term ethnicity, with the remaining 52 having no explicit definition at all. With no real resolution in sight, the term has been defined as needed by institutions and individuals to gather data or describe groups of people.

Two major viewpoints guide the issue: 1) objectivists, who regard ethnic groups as cultural and social entities with distinct boundaries that are characterized by lack of interaction and relative isolation, and 2) subjectivists, who describe ethnic groups as culturally constructed categorizations that guide social behavior and interaction and define these groups by subjective self-categorizations (Jones, 1997). This begs the question of whether ethnic groups are based on shared, objective cultural practices that exist independently or the more subjective notion that ethnic groups are constructed by the processes of perception and derived social organization of their members.

2.1.1 Longstreet’s Construction of Meaning for the Concept of Ethnicity

Longstreet (1978), unlike other scholars, provides the only constructed model for describing identified aspects of ethnicity. This model provides the socio-biological definition of ethnicity as being “that portion of cultural development that occurs before the individual is in complete command of his or her abstract intellectual powers and that is formed primarily through the individual’s early contacts with family, neighbors, friends, teachers, and others as well as with his or her immediate environment of the home and neighborhood” (p.19). This construction of the concept of ethnicity, originally developed to describe patterns that may exist among members of a social group, provides an appropriate and useful framework for investigating the impact digital communication tools are having on educational practices of cultures and societies.

Our children are interacting with computers very young, even as early as 2 or 3 years of age, which puts them into the age when they are powerful learners of languages of all kinds – including the operational languages of computing. Longstreet’s aspects of ethnicity are helpful in describing children growing up engaged and often surrounded by digital environments that encompass their early childhood. They are engaged in interactive video and computer games and other forms of digital communication at a time when biological development and ethnic understandings are most influenced, and yet these young children are not yet in command of their full abstract and intellectual powers and there is a lack of conceptual awareness of what is happening to them. The ultimate goal for the development of the Digital Ethnicity Scale is to describe those aspects of ethnicity using a digital lens and collect these descriptions along with demographic data to develop profiles of various digital ethnicities. These digital ethnicity profiles are intended to provide guidance for effective educational practices to serve the needs of a rapidly changing digital world.

2.1.2 Aspects of Ethnicity – The Underlying Theory and Working Model

Longstreet developed a functional model for the 5 aspects that may be used to describe her concept of ethnicity. These aspects are (a) social value patterns, (b) intellectual mode, (c) orientation mode, (d) verbal communication, and (e) nonverbal communication. A brief description of each follows:

1. Verbal communication may be described as the structure a person uses when communicating orally. The rules or patterns for this oral communication are learned by children prior to the development of their abstract intellectual abilities. The ability to learn language seems to be a universal capacity of humankind (Longstreet, 1978, p. 42).
2. Nonverbal Communication may be described as a system of facial expression, body movements and spatial arrangements that communicate meaning to others (Longstreet, 1978, p. 59).
3. Orientation Mode refers to patterns of behavior used, regardless of the presence of others, as ways of orienting oneself to the differing contexts of one's usual environment. It may be described as the way one communicates with themselves (Longstreet, 1978, p. 74). The orientation mode may be the most complex of the described modes. This mode is influenced by the social environment but ultimately becomes the ways one becomes comfortable in their own environment when no communication takes place.
4. Social Value Patterns are based on the sets of persistent behaviors that a group expects from its members and upon which it places certain values and upholds with certain beliefs (Longstreet, 1978, p. 89).
5. Intellectual Modes are described by Longstreet as the most emotionally charged aspect of ethnicity. This mode is not intended to deal with human innate intelligence, but rather reflect the way we externalize our thoughts, how we approach a problem, what gets our full attention, what details we are most likely to recall. Intellectual modes link intellectual performance to past experiences (Longstreet, 1978, pp. 106-107).

When seeking a model to describe human development through social interaction, and especially social interaction in digital communication environments, the notion of identity often emerges. The authors wish to acknowledge that identity focuses on the individual's definition of self (Erikson, 1968), whereas ethnicity describes an individual's place or believed inclusion within a cultural group. This inquiry focuses on the individuals as they relate to a group.

2.2 Digital Ethnicity as a Specialized Form of Ethnicity

When constructing a scale to describe those aspects of ethnicity that may be influenced by early and pervasive interaction with digital communication technologies, consideration of which aspects to investigate was a challenging task. Longstreet predicted a variety of contextual ethnicities that may be distinct ethnicities. These distinct and specialized ethnicities were described as being grounded in one or more of the identified 5 Aspects of Ethnicity. For example, Scholastic ethnicity may be a distinct form of ethnicity grounded in intellectual mode but still related to and having impact upon the other modes identified within this construction of ethnicity. National ethnicity may be a distinct form of social value patterns and communication modes. Gender ethnicity may be a distinct form of orientation mode. In this vein, the current research has sought to describe Digital Ethnicity as a distinct form of the combined Communication Mode, which is a combination of verbal and non-verbal communication mode.

2.3 The Digital Ethnicity Scale

Over a period of 2 years, the Digital Ethnicity Scale (DES) was developed and refined to test the construct of Digital Ethnicity using Longstreet's Aspects of Ethnicity Model. The final version of the Digital Ethnicity Scale contained 12 items designed to measure the three aspects of Intellectual Mode, Orientation Mode, and Social Value Pattern. Consistent with the previous revision, the scale was analyzed using exploratory factor analysis. The final analysis was conducted by specifying a 3-factor solution with a Varimax rotation. Because of previous refinements to the items, the suppression level for the factor loadings was increased to .50.

The results of the 3-factor solution from the factor analysis are presented in Table 1. The results indicate that the items loaded as predicted with all items loading above the .50 criterion. The first factor contained the four items related to Orientation Mode and accounted to 17.87% of the variance. Factor 2 contained the Social Value Pattern items and accounted to 15.82% of the variance. The final factor contained the four items related to Intellectual Mode and accounted for 15.57% of variance. Finally, the reliability estimates ranged from .570 to .648.

Table 1. Factor Loadings for Revised 15 Item Digital Ethnicity Scale

Item	Factor 1	Factor 2	Factor 3
I respond to emails immediately	.694		
I would rather send email than talk on the phone	.675		
I leave my computer on all of the time just in case I need to get online	.652		
I am usually on the internet at the same time every day	.600		
Posting pictures, even misleading ones, on the web doesn't hurt anyone		.775	
It is okay if I pretend to be someone else online		.736	
It is okay to talk about my private life online with people I do not know		.590	
It is okay to download or copy music for free		.571	
Using a computer makes me smarter			.701
Because of the internet I am able to solve problems myself that I would not be able to do otherwise			.693
Computers make us question what we know			.656
The internet helps me make good decisions			.584
Proportion of variance explained	17.87	15.82	15.57
Reliability	.634	.570	.648
Identified Aspect of Ethnicity	Orientation Mode	Social Value Pattern	Intellectual Mode

2.3.1 Semantic Differentials to Measure Communication Mode

The initial analyses of the semantic pairs identified a 3-factor structure consistent with the findings of Osgood, Suci, and Tannenbaum (1957). For the final phase of the development, 13 semantic pairs were retained and biased/fair was replaced because it did not load on any factor during initial analyses. Additionally, two pairs were added to the set for a total of 16 semantic pairs. The structure of the 16-item set was examined using a factor analysis with an eigenvalue greater than 1 extraction criterion, Varimax rotation, and .50 display criterion for factor loadings. The results of the analysis are presented in Table 2.

Table 2. Factor Loadings for 16 Semantic Pair Set

Pair	Factor 1	Factor 2	Factor 3	Factor 4
hard-easy	-.833			
easy to understand-confusing	.795			
fluent-awkward	.776			
comfortable-anxious	.743			
chaotic-ordered	-.613			
wholly engaging-insufficient	.515			
trustworthy-bogus		.777		
ethical-corrupt		.702		
personal-impersonal		.566		
part of a community-isolated		.522		
informative-entertaining			.682	
public-privacy			.608	
influential-inconsequential			.558	
interesting-boring			.534	
choice-need				.762
text intensive-highly graphic				
Proportion of variance explained	22.28	15.79	10.81	8.20
Semantic Space Dimension	Evaluation	Potency	Activity	

The results of the factor analysis of the 16 pairs indicated a 4-factor solution that accounted for 57.08% of the variance. The first three factors corresponded to the dimensions of Evaluation, Potency, and Activity, respectively, and accounted for 48.88% of the variance. The fourth factor only contained one pair, choice/need, and represented an additional unique dimension. Osgood et al. (1957) acknowledged that

semantic spaces would likely have more than the three dominant dimensions. Therefore, the structure of this set of semantic pairs is consistent with the common structure proposed by Osgood et al. Additionally, the failure of the text intensive/highly graphic pair to load on any of the factors suggests that it also represents a unique dimension. However, the variance accounted for by the dimension is not large enough to be extracted as a factor in the solution.

2.4 Discussion of Results

As digital communication technologies increasingly replace face-to-face communication and interactions, the experiences that construct human perceptions of reality are altered. Marshall McLuhan (1964) observed that “Everybody experiences far more than he understands. Yet it is experience, rather than understanding, that influences behavior” (p. 277). The Digital Ethnicity Scale seeks to describe those aspects of ethnicity that are influenced by immersive experience with digital communication tools.

When constructing a scale to describe those aspects of ethnicity that may be influenced by early and pervasive interaction with digital communication technologies, consideration of which aspects to investigate was challenging. We were unable to obtain consistent separate sets of data for the aspects of verbal and non-verbal communication. It appears that the digital media, not television but all other digital communication environments, has impacted the verbal forms of communication in ways that cannot be tested separately from nonverbal communication and in ways that do not exist in other environments. This fusion may well be a major characteristic of digital ethnicity, but not one that can as yet be characterized by the instrument we have developed. However, digital influences on those ethnic aspects of Social Value Patterns, Orientation Mode and Intellectual Mode provided distinct descriptions of digital ethnic behavior that appear to be useful for the development of an instrument focused on construction of digital ethnic profiles.

Just because this research did not find a description of the changes occurring to communication modes does not mean that these changes are not occurring. McLuhan’s 1967 conception that the *Medium is the Message* provides insight into this media-induced change and is probably more relevant now than when it was originally discussed. Even more relevant may be pursuing the impact of the digital environment on the construction of meaning and even of reality.

3. CONCLUSION

3.1 Further Exploration and Expansion of the Theoretical Basis of This Research

There exists a large amount of interaction between the world around us and the digital environment – our students are currently experiencing multiple environments that the individual is negotiating. For example, students write on a computer, stop and talk, and they may well send copies of the writing back and forth digitally and then discuss the work verbally. The investigation of this negotiation of a variety of learning environments is not studied with this current inquiry. This should be part of further study, but may be informed by the development of digital ethnic profiles. The ability to understand and accommodate changing orientation and intellectual modes along with an understanding of changing social value patterns that result from interaction with digital media will inform educators and other social scientists as we work to understand this emerging digital society.

3.2 Recommendations for Future Research

Through exploratory analyses, the current research has identified the foundations of a scale that reflects Longstreet’s aspects of ethnicity applied to the interaction with digital environments. However, the following recommendations should direct future research concerning the development and validation of the DES.

First, the analyses conducted in the present research were based on the total sample, which was skewed with respect to gender (72.3% females) and race (69.7% white), and did not examine the factor structure for subgroups. Future research should examine the scale properties for subgroups based on demographic

characteristics such as gender, race, and age through techniques such as confirmatory factor analysis. Because the current research included only respondents who were 18 years old or older, future research should also attempt to sample and examine the scale properties for individuals who are under 18 years. This is particularly relevant based on Longstreet's assumption that ethnicity is developed prior to the onset of abstract thinking in children and the volume of technology to which today's children are exposed.

Second, the current research has provided a foundational set of items related to each of Longstreet's aspects of ethnicity. Although the reliability estimates for the final set of items was acceptable for exploratory analyses, future research should continue to refine and potentially add items to increase the reliabilities of the subscales. Enhancing the reliabilities will also impact usability of the scale for research and practice.

Third, the current research focused on the development of an initial item set related to Longstreet's aspects of ethnicity. However, in order for the scale to have practical applications, procedures to calculating and reporting results must be determined. This is based on the assumption that different profiles will exist based on selected demographic data.

Fourth, future research should undertake the reconceptualization of Communication Modes (as a possible combination of Longstreet's original Verbal and Non-Verbal modes) in terms of the digital environments.

Fifth, because this inquiry has combined all of the different digital environments into one (computers, video games, intelligent phones, webcams, etc.), an investigation into the different types of digital environments should be undertaken.

Finally, it is commonly understood that interaction with digital technologies is changing the structures of society and varying aspects of human nature. Digital environments for work and play will only increase, therefore, the theoretical constructs describing digital ethnicity should be pursued further. McLuhan's work of the 60s and 70s and Hall's undertakings may provide further avenues for investigation.

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